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ABSTRACT

Three issues must be addressed when discussing the standards needed to judge the methodological rigor of naturalistic approaches to administrative research. The first issue involves defining naturalistic inquiry. In contrast to the scientific paradigm, naturalistic inquiry emphasizes, first, the inseparability of variables or events from their contexts and, second, the subjects' intellectual frameworks and the need to develop "thick descriptions" of the world as the subjects experience it. The second issue concerns the criteria for judging the adequacy of naturalistic inquiry; the criteria should be appropriate to the characteristics of naturalistic research and the procedures for enhancing its credibility. Naturalistic research includes simultaneous collection and analysis of data using multiple methods and an "audit trail" to allow replication of the study. Credibility is enhanced by prolonged data collection on site, checking of information through multiple sources, collection of referential materials about findings and interpretations, peer consultation, and thick description. The third methodological issue concerns the final report. Naturalistic reports should use ordinary language and be trustworthy, well organized, and ethical, but above all they should use thick description to "take the reader there." (Author/RW)

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METHODOLOGICAL RIGOR IN NATURALISTIC INQUIRY: SOME ISSUES AND ANSWERS

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Presented at the
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METHODOLOGICAL RIGOR IN NATURALISTIC INQUIRY: SOME ISSUES AND ANSWERS

ABSTRACT

As naturalistic approaches to administrative inquiry are employed with increasing frequency, it becomes important to establish rigorous standards in judging the adequacy of such studies in the proposal, execution, and final report stages. This article proposes some ways of dealing with three specific issues in judging the methodological adequacy of naturalistic inquiry.

In the 1970's the resurgence of phenomenological views of "truth" and "understanding" gave rise--once again--to naturalistic modes of inquiry in administrative studies. Beginning with the so-called "theory movement" in the early 1950's, the rational positivist concepts underlying the hypothetico-deductive approaches to "scientific" inquiry had gained clear dominance. Of late, however, we increasingly hear of renewed interest in naturalistic approaches to inquiry in organization and administration.

On one hand, there is optimism that the "newer" naturalistic approach to inquiry will encourage us to ask new, more insightful research questions and generate more powerful understandings of organizational and administrative problems. On the other hand there is serious concern that we are in the process of abandoning the rigorous standards of scientific inquiry and reintroducing "sloppy research" as the standard in our discipline. For example, Ray Rist (1980) has expressed concern about the appearance of "blitzkrieg ethnography" as a current fad in educational research. Wolcott (1980) has been moved to chide educational researchers on "How To Look Like An Anthropologist Without Really Being One." Surely these can be taken to some degree to be the self-serving views of would-be gatekeepers. However, there is real reason to be concerned that the naturalistic approach to inquiry may well be adversely affected unless we quickly pay serious attention to establishing its credibility through recognition of proper standards by which to govern its practice.

The focus of this paper will be on a few selected issues that confront a professor of educational administration in directing

doctoral students in the design and execution of thesis research. I propose to discuss three basic issues and, in each instance, suggest some "answers" that I find useful. The issues are:

1. To specify what naturalistic inquiry is,
2. To identify and discuss some key elements in judging the adequacy of a naturalistic study, and
3. To identify and discuss some essential characteristics of the research report.

Throughout, I shall argue that many of the concepts and criteria in which we have been well-trained are inappropriate to use in judging the adequacy of naturalistic inquiry.

TO SPECIFY WHAT NATURALISTIC INQUIRY IS

As Guba (in press) has pointed out, there are several paradigms (Kuhn, 1970) for discovering "truth" or for "understanding." There is, for example, a judicial paradigm which has well-established rules of procedure, rules of evidence, and criteria for judging the adequacy of a given judicial proceeding. The judicial paradigm provides guidelines for behavior in courtrooms, hearings, and other judicial approaches to discovering "facts", "truth", and "understanding." Until recently the judicial paradigm has had little utility in educational inquiry but is now gaining popularity as an approach to educational evaluation (Wolf, 1979). The fundamental reason for increased interest in this paradigm has been the hope that, by avoiding some crucial methodological shortcomings of now-traditional evaluation paradigms, we may arrive at more useful evaluations of educational policies and practices.

Another widely-used paradigm for gaining understanding or discovering meaning is that of expert judgment. This is, of course, commonly used in the accreditation of educational institutions in which the site visiting team is expected to exercise expert judgment. Such an approach is commonplace in judging athletic performances and artistic efforts of many kinds (Eisner, 1981).

Two Paradigms of Inquiry in Science

However, two other--and distinctly different--paradigms of inquiry have vied for dominance in the modern history of science. The shift from the traditional intuitive and wholly empirical study

of educational administration to a more scientific approach was accomplished by linking up with the social and behavioral sciences in the 1950's. This, of course, made not only the knowledge, theory, and concepts of the social and behavioral sciences available to administrative research but also their research traditions.

Clearly the controlled experimental study has earned a place in the traditions of scientific inquiry as the most powerful, the most persuasive, design for research. Just as clearly the social and behavioral scientist is often unable to use experimental research because it is difficult to control critical variables outside of the laboratory. The history of the social and behavioral sciences as they developed from their nineteenth-century beginnings is filled with epistemological issues related to the "two modes of thought" (Conant, 1964), that is, deductive and inductive. William James described the tender-minded and the tough-minded. Others have spoken of the theoretical and the practical. "Hard vs. soft", "natural vs. social", "science vs. criticism", "quantifiers vs. describers", "rigor vs. intuition" are common trite cliches often heard to describe the dichotomy between the "two modes of thought" in administrative and organizational research. Thus, in reducing the dialectic to simple and rigid polarities--often coming close to moral judgments such as "good" or "bad"--we obscure the complexities and nuances in these two approaches to "knowing", "understanding", and--as Conant pointed out--thinking.

The scientific paradigm. Of the two research paradigms one stands clearly as the dominant approach in educational research.

it is often called quantitative research though, as we shall see, this is a misnomer and is commonly thought to be a methodology, which it really is not. However, it is more widely published, taught, accepted, and rewarded in educational research circles than any other approach (Rist, 1977, p. 42). It has been well established as the Scientific Method. Campbell and Stanley (1963, p. 3) in their widely used primer on research methodology call this approach to research "the only available route to cumulative progress."

Clearly the epitome of the scientific paradigm is the controlled experiment, which Campbell and Stanley (1963, p. 2) describe as "the only means of settling disputes regarding educational practice, the only way of verifying educational improvements, and the only way of establishing a cumulative tradition in which improvements can be introduced without the danger of faddish discard of old wisdom in favor of inferior novelties." Essentially the view is that what exists can be extrapolated from its environment and, because it exists, it exists in some measure and thus can be measured in quantifiable terms. In the scientific paradigm research methods other than the controlled experiment are considered inferior methods but acceptable if certain procedural safeguards to insure the basic integrety of the study are adequate.

Some crucial basic assumptions that underlie this set of notions about "procedural safeguards" and "integrity" are:

1. That certain parts of the real world, which we call "variables", may be singled out (literally or through statistical manipulation) from reality for study or treatment while controlling other parts of the setting.

Ideally, therefore, laboratory experimentation is the epitome of method because of the greater control it affords the inquirer.

2. That the inquirer and the subject under study are, and should remain, independent of one another. Typically this is facilitated by interposing "objective" data-gathering instruments between the inquirer and the subjects under study.
3. That context-free generalizations are not only possible but the essential goal of inquiry.
4. That quantitative methods are inherently preferable to non-quantitative methods--thus leading to the common confusion between the concept of quantitative methods and the scientific paradigm itself.
5. That the use of a priori theory and hypothetico-deductive methods (typically hypothesis-testing) is not only important to the design of studies but the cumulation of knowledge itself.
6. That a preordinate design specify each step of the inquiry in advance, from data collection through its analysis (Stake, 1975).

Operationally, research organized by the tenets of the scientific paradigm begins with an existing theory which is used to set up an articulated problem in advance of the inquiry. The next step is to convert the problem into dependent and independent variables. Having done this one proceeds to develop strategies and instruments,

attempting to control and uncover relationships between and among the naturally occurring variables through the design. Once the steps of the preordinate research design have been completed the inquirer then returns to the theory to interpret the results (Ianni, 1976).

For the purposes of this paper I shall use the term "scientific" in referring to inquiries that (1) use formal instruments or other a priori techniques for categorizing as the primary basis for collecting data, (2) transform the data into quantitative expressions of one kind or another, and (3) attempt to generalize the findings in some formal way to some universe beyond that bounded by the inquiry. I realize, of course, that this is not an exhaustive list of the characteristics of the "scientific" paradigm in inquiry but I do think that they are the salient ones and, therefore, I regard them as modal characteristics.

The scientific paradigm is, by an awesome margin, the dominant, established tradition in systematic inquiry. We have no choice but to think of a competing paradigm in terms of similarities and/or differences with this, the standard approach to inquiry in modern science.

The naturalistic paradigm. The second of the two inquiry paradigms in science is the naturalistic paradigm.

What is not always clear is that naturalistic inquiry is based on two sets of concepts which taken together provide a strong rationale for it as a research paradigm (Wilson, 1977, p. 247). One set of concepts is the naturalistic-ecological hypothesis which

claims that human behavior is so significantly influenced by the context in which it occurs that behavioral regularities in those contexts are often more powerful in shaping behavior than differences among the individuals present. In this view, behavior of people in schools is seen as powerfully influenced by the organizational context in which it occurs (Barker, 1968; Lortie, 1973; Sarason, 1971). Thus, "If one wants to generalize research findings in schools, then the research is best conducted within school settings where all these forces are intact" (Wilson, 1977, p. 248).

The other set of concepts basic to naturalistic inquiry is the qualitative-phenomenological hypothesis. This essentially holds that one cannot understand human behavior without understanding the framework within which the individuals under study interpret their environment--and this can best be understood through understanding of their thoughts, feelings, values, and perceptions and their actions.

The term "naturalistic" is, I think, appropriate as I shall explain in a moment. But, first, it should be made clear that the naturalistic paradigm is a different way of "knowing" than the scientific paradigm. It emanates from a basically different view of the six assumptions discussed earlier. The naturalistic inquirer would posit that:

1. In the real world, events and phenomena can not be teased out from the context in which they are inextricably embedded and understanding involves the interrelationships among all the many parts of the whole.

2. It is illusory to suppose that interaction between inquirer and subject might be eliminated. Indeed this dynamic relationship can make it practicable for the inquirer, himself or herself, to become the data-gathering and processing "transducer."
3. Generalizations are suspect, at best, and knowledge inevitably relates to a particular context.
4. That qualitative methods--which emphasize both inner and outer knowledge of man in his world--are preferable. As Filstead (1970, p. 6) put it: "Qualitative methodology refers to those research strategies such as participant observation, in-depth interviewing, total participation in the activity being investigated, field work, etc., which allow the researcher to obtain first-hand knowledge about the empirical social world in question. Qualitative methodology allows the researcher to get close to the data, thereby developing the analytical, conceptual, and categorical components of explanation from the data itself."
5. Thus, theory emerges from the data themselves in the sense that Glaser and Strauss (1967) describe "grounded theory."
6. The naturalistic inquirer, believing in unfolding multiple realities, in interactions with respondents that will change both them and himself over time, and in grounded theory, will insist on a design that unfolds over time and which is never complete until the inquiry is arbitrarily terminated as time, resources, and other logistical considerations may dictate (Guba, in press, p. 8).

What does "naturalistic" mean? It is important to start with some clear notion as to exactly what "naturalistic" means when we apply it to inquiry. Partly because the term has complex meanings but mainly because it is at odds with awesomely well-entrenched traditional concepts regarding inquiry, it helps to try to define the term in two ways: (1) what it essentially means to inquirers and (2) how it differs from what must be called "scientific" inquiry.

The term, naturalistic, expresses one view as to the nature of reality. It is the view that the real world that we encounter "out there" is such a dynamic system that all of the "parts" are so interrelated that one part inevitably influences the other parts. To understand the reality of that world requires us to understand that we cannot separate the parts, bit by bit, for careful examination without distorting the system that we seek to understand. We must examine the parts, as best we can, in the context of the whole. It is, essentially, a phenomenological view as differentiated from a logical positivistic view of reality of the world.

The logical positivist approach to understanding our complex world emphasizes singling out various "variables" for study while attempting to control other variables in the situation in the meantime. The naturalist, on the other hand, views this as altering the situation, resulting in distortions of our understanding of reality. Thus if we seek to understand the realities of human organizations and the behavior of people in them the naturalistic view would hold that we must examine those organizations in all the rich confusion of their daily existence. We must study human behavior in situ if we are to understand it.

For the purpose of this paper I shall use the term "naturalistic" in referring to inquiries that (1) primarily employ direct contact between investigators and actors in the situation as a means of collecting data, (2) use emergent strategies to structure the design of the study, rather than a priori specification, (3) develop data categories from examination of the data themselves after collection, and (4) do not attempt to generalize the findings to a universe beyond that bounded by the study. Again, I realize that many other characteristics may properly be associated with naturalistic inquiry. I think that these are salient, and therefore modal, characteristics of naturalistic inquiry.

Are "naturalistic" and "qualitative" synonymous? Let me turn now to the term "qualitative" in the context of the foregoing discussion. While "naturalistic" alludes to ways in which we may seek to examine reality and these ways emphasize the wholeness and phenomenological interrelatedness of the real world, "qualitative" alludes to the nature of the understanding that we seek. Qualitative inquiry seeks to understand human behavior and human experience from the actor's own frame of reference--not the frame of reference of the investigator. Thus, naturalistic inquiry seeks to illuminate social realities, human perceptions, and organizational realities untainted by the intrusion of formal measurement procedures (Wolf and Tymitz, 1976-1977) or reordering the situation to fit the preconceived notions of the investigator. The qualitative nature of the resulting description enables the investigator to see the "real" world as his subject sees it.

Thus, qualitative description is not necessarily the exclusive territory of the naturalistic inquirer. Positivists can, and do, use qualitative methods in their investigations. For example, data gathered through paper-and-pencil instruments can be (and often are) used as indicators of group norms or values or other social forces that influence behavior (Douglas, 1970). However, the techniques for uncovering and describing the qualities of these norms and values differ importantly between the two approaches. The naturalistic inquirer will in all likelihood regard gestures, language, and behavior patterns of the subjects as significant descriptive data. The positivist, on the other hand, tends to search for understanding through data supplied by either the subjects or others using such standardized means as questionnaires and inventories or through analysis of demographic or other descriptive data. But the nature of the quality of description yielded by these two approaches differs in important ways: one yields lean, spare description stripped of the contextual references in which the data originated. The other yields what Geertz (1973) calls thick description.

Thick description provides meaning of human behavior in the real world in such terms as cultural norms, deep-seated values and motives arising from cherished tradition, and community values. "Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun," comments Geertz (1973, p. 5) "I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning." Thus, thick description conveys very much

the sense of the web of interrelated contextual factors that is associated with the situation under study. Thick description is more than mere information or descriptive data: it conveys a literal description that figuratively transports the reader into the situation with a sense of insight, understanding, illumination if you will, of not only the facts or the events in the case but of the texture, the quality, and the power of the context as the participants in the situation experienced it.

This qualitative characteristic of inquiry is well illustrated by Philip Cusick, who spent six months in a high school as a participant observer (Cusick, 1973). He describes, for example, that teachers in the school routinely spent 10 to 15 minutes of the 40-minute class period checking excuses and passes and on other actions intended to control students (Cusick, 1973, p. 29). Further, when teachers finally did attend to the lesson for that class period, inattentiveness on the part of some students and numerous interruptions from others greatly reduced the amount of time devoted to teaching and learning activities. Thus, he estimated that the average student spent less than 1½ hours a day mentally engaged in the processes of learning (Cusick, 1973, pp. 42-68). But Cusick's observations go beyond this sort of informing, which is relatively objective and quantified, to take on the richer meaning associated with thick description. He discovered, for example, that teachers and administrators often ignored gambling and stealing among the students, while punishing those who cut classes or violated school routine (Cusick, 1973, p. 160). Students who did little work were

reported to succeed academically as long as they paid strict attention to classroom routines and school rules (Cusick, 1973, p. 61).

This sort of qualitative description of life in schools has been confirmed numerous times in a wide variety of sources, such as those cited by Silberman in his chapter entitled "Education for Docility" (Silberman, 1970). But, perhaps more germane to this discussion, it "takes the reader there" and--as those generally knowledgeable about schools will acknowledge--conveys a keen insight into the behavior of people in those schools which may not be a commonplace description but is qualitatively "thick" in that it conveys much that is meaningful about the context-bound nature of the behavior under study.

Summary. I have addressed the issue of specifying what is meant by "naturalistic inquiry" by (1) comparing and contrasting some of its assumptions with those of the dominant "scientific" paradigm and (2) elaborating on the concepts underlying the key terms "naturalistic" and "qualitative." I have argued that a basic concept of "naturalistic" inquiry is the focus on the phenomenological wholeness of the systems we study. And I have taken the position that "qualitative" emphasizes thick description that yields understanding of human behavior from the point of view of actors as they experience the world.

I will turn now to the second issue on my agenda: judging the adequacy of a naturalistic study.

JUDGING THE ADEQUACY OF A NATURALISTIC STUDY

As the "domain assumptions" (Gouldner, 1970) that underlie scientific and naturalistic inquiry are basically different and essentially polar, so the criteria by which to judge the appropriateness of research design and methodological adequacy of studies representing the two domains are significantly different. The issue arises as to the criteria by which to evaluate research proposals, supervise research in progress, and to judge the adequacy of a reported study. The impressive impact of the perceived status of the scientific paradigm, and the resulting one-sidedness of our own training, creates a strong temptation for us to apply criteria appropriate to that paradigm. For example, not long ago I received a proposal from the chairman of a doctoral student's research committee which proposed to use open-ended unstructured interviews as the primary source of data. Appended to the proposal was a 5-page list of questions to be asked in the interviews. It was clear that neither student or mentor understood the meaning of either "unstructured" or "open-ended."

I would like to discuss with you a few of the issues involved and some of the answers that I have found helpful. The issues come into focus when we review the assumptions underlying the scientific paradigm and some of the procedures and safeguards that we have all been trained to include in the design of our studies. In scientific inquiry, for example, we seek not some thin slice of the "real" world (Carlson, 1979) but preferably something more comprehensive, more generalizeable. So in assessing the design of a study we look

for representativeness of the sample which is usually assured by either a large size sample or a stratified sample. And, if the response rate is adequate, we can generalize the results as applying to a larger population which our sample represents. This is, of course, commonly referred to as external validity.

To minimize bias on the part of the investigator we seek to eliminate subjectivity and maximize objectivity. This may be dealt with in a number of ways but a "double blind" design--in which neither the subject nor the data collector know the purpose of the study--would be considered highly objective. At least we maintain a careful social distance between subject and investigator--often by interposing formal data-collecting instruments (such as paper and pencil questionnaires) between the two--to minimize affective bias (such as empathy) arising from the interaction. Normally the proximity of the investigator to the situation under study is minimized to assure maximum detachment from it. All of this we ordinarily call objectivity.

And, in the scientific paradigm, we seek to control for the unknown and unknowable. For example, we normally use random procedures for selecting samples of subjects within the total population under study. We may not even know what the differences are that we are seeking to cancel out: we need only to know that random distribution across groups should prevent the differences from making a difference (Carlson, 1979, p. 5). On the other hand if it is not feasible to select our population sample randomly, we may seek to heighten control of unknown variables by matching our

population samples on the basis of "relevant variables." The remaining variables, having been declared irrelevant, are no longer considered to be intrusive in the realm under study. These are some techniques for dealing with issues of internal validity.

One is concerned also with the need to be sure that the data collection measures yield consistent results: If the tests are given again or if the interviews are replicated will we get the same results or is there likely to be some drift leading to confounding interpretation (Patton, 1975)? Thus we are concerned with reliability of our data-gathering procedures such as instrument reliability, reliability between items (inter-item), and reliability between and among raters and/or interviewers.

And, certainly, we look for a preordinate research design. It should specify in advance of initiating the study each step that will be taken to collect and analyze data in order to test the hypotheses or answer the research questions. Important in the design are the specified procedures by which the investigator will deal with issues of external validity, objectivity, internal validity, and reliability. When we evaluate the preordinate design of thesis research utilizing the scientific paradigm, usually in the form of a thesis proposal, these are important criteria by which we judge its adequacy. In directing the execution of the research and, finally, in examining the written research report these are--or ought to be--important issues under consideration.

It has been well and forcefully argued that, because of the assumptions about the nature of reality and ways of understanding that reality in the naturalistic paradigm, the traditional concern

for objectivity, validity, and reliability have little relevance in the design of naturalistic research. Scriven's (1972) now-classic work on subjectivity and objectivity was a major contribution pointing out that what we have traditionally called "objective" and "subjective" have commonly been confused with the quantification of data often masking subjective bias. In short, Scriven made clear that quantification in research, usually accompanied by statistical manipulation of data, has come to be confused with objectivity--which is the sine qua non of scientific research.

But in order to avoid unreliable, biased, or opinionated data the naturalistic inquirer seeks not some "objectivity" brought about through methodology but, rather, strives for validity through personalized, intimate understandings of phenomena stressing "close in" observations to achieve factual, reliable, and confirmable data (Rist, 1977, p. 46). Whereas the scientific methodologist might pursue confirmation through the use of data from a number of subjects, the naturalistic methodologist seeks to confirm through intensive study of a small group or even a single individual.

The striving for generalizeability has had powerful impact on the canons of the scientific paradigm of inquiry. However, Cronbach (1975) has brilliantly argued that generalizations are not enduring: they do, in fact, break down over time--in all fields of science, the physical and biological as well as the social sciences. If the stars shift in their courses so as to render star maps obsolete and DDT fails to control mosquitoes as genetic transformations make them resistant to the compound, it becomes clear the every generalization

is less scientific truth than it is history. But more germane to the present discussion is the inescapable conclusion that far from achieving generalizations, scientific inquiry reveals "truth" very much embedded in the context in which it is discovered. This is all the more important in administrative and organizational studies for, as Guba and Lincoln observe (1981, p. 62), "It is virtually impossible to imagine any human behavior that is not heavily mediated by the context in which it occurs." Thus the notion of discovering context-free generalizations through research is seriously called into question by the naturalistic paradigm.

Assessing the adequacy of naturalistic inquiry designs and research reports requires us to use criteria that are appropriate to the domain assumptions of the paradigm. The criteria we use and the things we look for will therefore differ from those appropriate to the scientific paradigm, a few of which have just been mentioned. In this short paper I will focus on only two of these criteria issues because I think they are salient issues:

1. Some characteristics of the plan of the research,
2. Procedures to enhance credibility of the study.

Characteristics of the Naturalistic Research Plan

The inquirer in the scientific paradigm views research design as a sequence of discrete procedures bonded by a predetermined timeline. The naturalistic investigator views the design as providing an emergent plan for a highly interactive process of gathering data from which analysis will be developed. I describe it as an interactive process because data collection and analysis go on simulta-

neously, with the analysis giving direction to the data collection by suggesting what to check, when to seek confirmation, and how to extend the data collection itself. To be more specific, let me turn now to a brief discussion of three elements that are ordinarily found in the plan of a naturalistic study--whether in the proposal stage, the execution of the study itself, or the research report: the research strategy, strategies for collecting data, and the audit trail.

The research strategy. Normally, the research strategy will provide for a rather broad-scale exploration at the outset that is simultaneously accompanied by checking for accuracy, seeking verification, testing, probing, and confirming as the data collection proceeds. Typically, the strategy will emphasize data-gathering in the early phase of the project but (as checking, verifying, testing, probing, and confirming progress) will follow a funnelling design resulting in less data-gathering in later phases of the study with concurrent increase in checking, verifying, and confirming (see Figure 1). In the early stage of such a study perhaps 80 percent

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Figure 1 goes about here

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of the time and effort will be spent in gathering data while 20 percent will be devoted to analysis; in the latter stages of the study this may be reversed with 80 percent devoted to analysis and 20 percent devoted to data collection (see Figure 2). An important

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Figure 2 goes about here

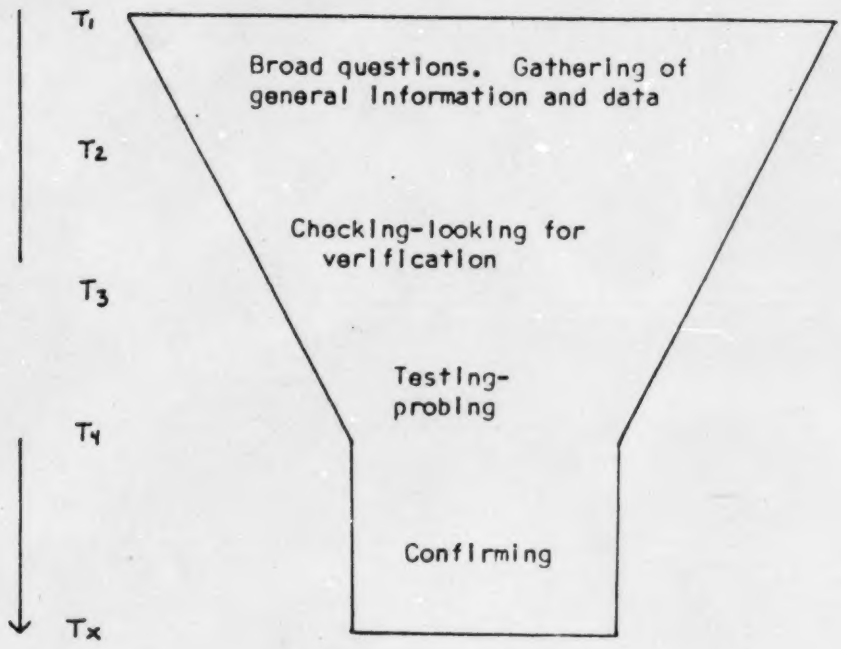

FIGURE 1. General outline of plan for a naturalistic study.

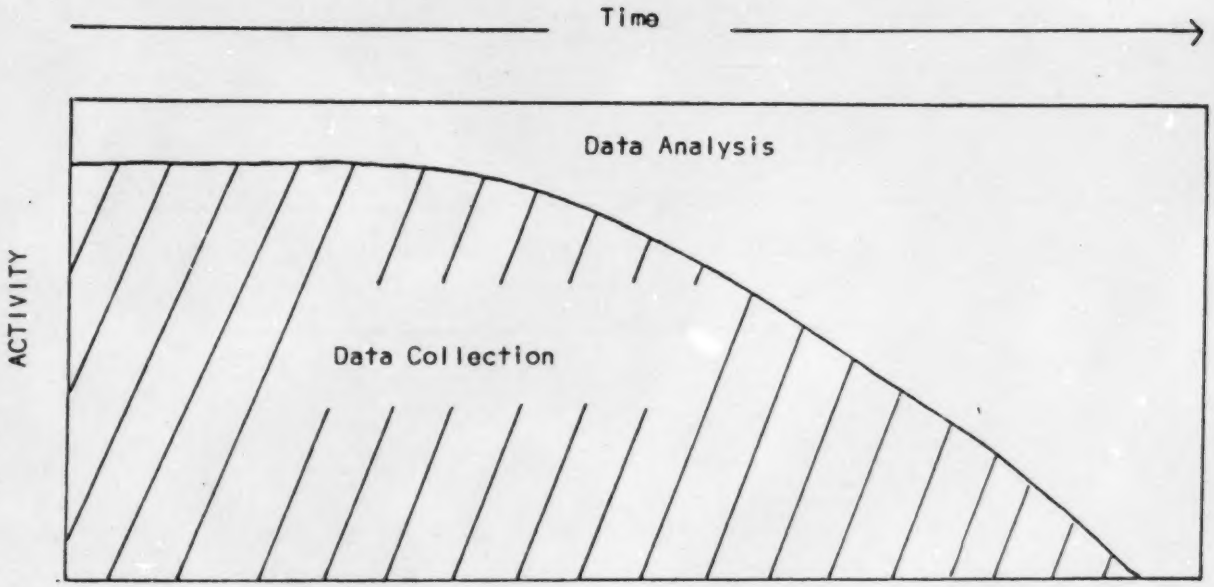

FIGURE 2. Typical pattern of data collection and data analysis in a naturalistic study.

element in the design of naturalistic research is to start with questions of broad scope and proceed through a conceptual funnel--working with data all the while, trying to ever more fully understand what the data mean--making decisions as to how to check, how to verify as the investigation unfolds. It is important in the design of such a study that the investigator be fully prepared to look for unanticipated perceptions arising from the data as he/she gets closer and closer to the data over time.

Strategies for collecting data. Rarely will an adequate naturalistic research design use only a single method of data collection. Typically, a single data source (such as interviews, or logs kept by subjects at the request of the investigator) indicates that the study design is a simple survey.

However, for example, when one claims to employ ethnography as a basis for the design of a study the procedure should include not one method of collecting data but three: participant observation (Spradley, 1980), ethnographic interviews (Spradley, 1979), and document search. All three methods of collecting data must be used and strategies must be used in the field to integrate the findings emerging from all three. The intent is to confirm or disconfirm emerging findings, to triangulate so as to increase accuracy, to add richness of quality to the data.

Whether or not one chooses to claim to use ethnographic methods it is important that the naturalistic research design (1) provide for multiple data sources and methods of collection and (2) describe the techniques that are used to check and validate analyses as the research proceeds.

The audit trail. At best, the naturalistic inquiry must withstand both skeptical as well as friendly criticism concerning methods used and, of course, the credibility of the results. At worst--as we have recently seen in the case of investigative journalism--there may be skepticism as to the basic truth of the reported research. Guba and Lincoln (1981) have proposed that an "audit trail" be carefully maintained throughout the course of a naturalistic study consisting of documentation of the nature of each decision, the data upon which it was based, and the reasoning that entered into it (Guba, 1981, p. 122). The existence of a carefully-documented audit trail makes it possible to do two important things: (1) to examine the procedures of the study, either while it is in progress or after the fact, so as to verify its consistency and credibility by independent external auditors and (2) to make it possible to reproduce the study at another time.

An audit trail consists of deliberately leaving sufficient evidence so that someone external to the inquiry reviewing the processes and results of the inquiry could agree that the processes were appropriate and the results reasonable and credible. A basic component of the audit trail is the investigator's log. In this personal journal the investigator meticulously records not only all contacts throughout the study from beginning to end but also two other key kinds of information: (1) the reasoning and logic that entered into every decision as the investigation unfolded and (2) the hunches, guesses, feelings, perceptions of the investigator as they occurred during the course of the investigation.

But a log is not an audit trail; at best it is an annotated index to the audit trail. The trail itself will consist of numerous documents carefully preserving the record of the investigation. Among them may be the following:

- raw notes from interviews and observations
- edited summary notes of interviews and observations
- records of meetings with the research committee
- all documents used as data sources
- guidelines and "rules" used for content analysis of documents
- decision rules by which data were categorized
- interview guidelines
- completed documents that may have been commissioned as part of the study.

Guba (in press; Guba and Lincoln, 1981) has proposed--particularly in the case of evaluation studies--that an independent external auditor be employed to conduct an impartial audit and report on the reasonableness of its findings in light of the investigative procedures used. In the case of doctoral thesis research this may not be feasible due to cost. However, the faculty research committee supervising the thesis research might well serve as the primary auditors of such studies.

Procedures to Enhance Credibility

When confronted with the bewildering dynamic patterns of interrelated people, events, and contexts in organizations investigators are necessarily called upon to "make sense" of the confusion. At the same time they are called upon to demonstrate that

the steps they have taken in this sensemaking process yield credible explanations. How, for example, does one sort out the complex patterns of behavior in an organization so as to discern what is "really" happening? And, having done so, how do we assure ourselves and others that we understood what was "really" happening and were not misled by the intrusion of bias and various sources of error? How can we accept the findings as credible interpretations of reality? Answers to questions such as these must be provided by the naturalistic inquirer that are in harmony with the basic assumptions of the naturalistic paradigm such as the holistic perspective on reality, multiple factors of causation, and the context-bound nature of truth. Such a study, then,will utilize a number of techniques intended to enhance its credibility. I will briefly discuss four of these techniques that I consider essential to the design of naturalistic inquiry.

Prolonged data-gathering on site. Time, extended periods of time, immersed in the situation is important. It provides for entry into the situation, "learning the language," becoming accepted, trusted, and ultimately relatively unnoticed. Time permits the researcher to see the atypical in the situation against a backdrop of broad trends so that he or she can sort the significant from the passing event. Time also permits the researcher to check his/her deepening perceptions of what is happening and to examine his/her own biases and attitudes in terms of the situation under study. In short, time is essential to permit the researcher to shift from predispositions, through early impressions, to a deeper level of

understanding. Throughout the period of prolonged data-gathering, the inquirer's log should record a chronicle of the struggle to understand the thickening of the description, if you will, the deepening of insight into the situation under study.

Triangulation. The investigator uses a number of sources of information and data--not necessarily about different things but about the same things. As themes begin to arise from interviews or documents or observation they are cross-checked with other sources so as to verify them, to check the accuracy of information, and to test the perceptions of different actors to given events. Whenever possible, one should use multiple data-gathering techniques: interviews, document analysis, self-reports, questionnaires, observation, and other approaches all have the potential for cross-checking and verifying data.

Member checks. The investigator continuously corroborates data, information, and perceptions with relevant others in the organization. Quite literally he or she may go to an actor in the situation and say, "Some people say that [so and so] is typical of the way things get done here. What do you think?" Guba (in press, p. 21) claims that, "The process of member checks is the single most important action which the inquirer can take, for it goes to the heart of the credibility criterion." Again, the inquirer's log and the audit trail should include careful documentation of member checks and how the feedback from them was used to alter the inquiry (Guba, in press, p. 21).

Collect referential adequacy materials. Wherever possible the investigator should create and maintain a file of materials from the site that relate to findings and interpretations. This can include all sorts of relevant documents (handbooks, copies of memos and other ephemeral materials, etc.). It might well include video tapes, audio tapes, photographs, and films. These materials can help preserve over time some sense of the context in which observations were made and thus aid in recall of events. The investigator must make careful judgments, however, in balancing the wish to have a complete video tape record of the study on one hand and the need not to intrude excessively into the setting under study on the other hand.

Develop thick description. In the course of prolonged observation the investigator will be carefully triangulating, conducting member checks, corroborating information, and collecting referential adequacy materials all for the purpose of developing thick description. This calls for synthesizing, integrating, and relating observations in such a way as to "take the reader there." This is not an easy task and I will comment on it a bit more in the final section of this paper.

Engage in peer consultation. It is desirable, particularly in the case of lengthy observational studies, to be able to disengage from the setting and discuss the progress of the work and the nature of the experience with qualified peers who are interested (Murphy, 1980, pp. 71-72). For faculty this might mean meeting with some colleagues who are skilled in naturalistic methods; for a student

investigator it might be the thesis director or, preferably, the thesis committee. The peer consultation provides opportunities while the work is still in progress to check one's thinking, to raise questions and concerns, and to talk through problems of which the investigator may or may not be aware. Again, the investigators log should record peer consultation, note the nature of the feedback received, and reveal how the study has been redirected as a result.

CHARACTERISTICS OF THE NATURALISTIC RESEARCH REPORT

To some, it appears that the reports of research in the scientific paradigm have an advantage in that they are replete with arcane numbers and symbols that comprise codes that are indecipherable to the uninitiated and, therefore, all the more intimidating. Surely, to be told that something is accepted as statistically significant at the .001 level is difficult for anyone except a statistics specialist to discuss. In addition, typically the reports of scientific research are carefully couched in the third person singular throughout so as to heighten the sense of disinterested objectivity.

Language becomes important and words significant. For example, persons under study are routinely referred to as subjects--a term etymologically derived from the Latin subjectus, meaning literally to place one under, put one under, another's authority (Wolf, 1979, p. 4). Form becomes important and is highly standardized. Speaking to this point, Eisner (1981, p. 7) observed ". . . the standardization of style is considered a virtue. One is supposed to identify the problem, review the literature, describe the instruments and population, report the treatment, present and discuss the results and, finally, project possible implications. If, in this format, any sense of the personality of the investigator shines through, it is to be neutralized. This is accomplished by requiring that writers use the third person singular or the first person plural instead of using the "I" form. The people studied are referred to as "subjects" or "S's" and whatever uniqueness particular individuals might have are to be disregarded."

A distinctive characteristic of the naturalistic research report is that it is usually written in ordinary language. In contrast with research reports in the scientific paradigm, naturalistic inquirers rarely refer to "subjects" let alone "S's." More commonly they speak of respondents, from the Latin respondens--meaning responding, answering (Wolf, 1979, p. 3). The difference between this term and the scientific paradigm's use of subject is not inconsequential; it clearly reveals the intent of the scientific inquirer to control his/her subjects (or, at least, control what happens to them) as against the naturalistic inquirers intent to understand what the respondent experiences, knows, believes, feels, values.

A second characteristic is that it is trustworthy. It must be based upon trustworthy data collection and analysis procedures, a few of which I have discussed. But the report itself must be plausible, carefully documented, and provide corroboration from multiple sources.

Third, it should be valid, meaning not only that it is accurate--based upon well-corroborated evidence--but in addition it provides rich, thick description. Judgments and conclusions in the report should be demonstrably reasonable, meaning that they are well connected to the evidence and supportable by a carefully-maintained audit trail.

Fourth, the report should be well-organized, its parts well inter-connected, and follow a clear plan of exposition. It should be as free of jargon as possible but it should be lively, rich in thick description that "takes the reader there."

And, fifth, the report should be ethical. The evidence in it should not have been obtained under false pretenses and it should scrupulously observe agreements as to confidentiality, explicit or implied, that were entered into during the study. Certainly it is important to safeguard the rights of respondents, as we would safeguard the rights of subjects in scientific research. The problem of defining and specifying ethical behavior, as we all know, grows more complex with time.

Among naturalistic inquirers there is some debate as to how much the inquirer should interpret his or her observations for the reader. Some, such as Barker (1968), contend that events and conditions should be described, leaving the reader to interpret the meaning; others, such as Smith and Geoffrey (1968), attempt to provide thick description supplemented by interpretation. However, a basic purpose of the naturalistic research report is to "take the reader there"--to provide a report that yields a rich sense of <u>understanding</u> events, of having <u>insight</u> as to their <u>meaning</u>. Therefore, an important factor in judging the adequacy of a naturalistic research report is the clarity with which the texture and quality of the findings are transmitted to the reader. Ordinarily this kind of thick description--this description of complex patterns of behavior, regularities in the occurance of events, and the meaning of seemingly disconnected pehnomena--requires language and writing style capable of conveying rich understanding of the qualitative texture of the situation under study.

There are numerous classic examples that are instructive. One thinks, for example, of Whyte's description of the bowling matches

between the Norton street gang and another young men's group (1955, pp. 318-320). In reading it one comes to understand the social relationships that were played out between the groups and individuals in them. By describing the bowling match in careful detail, Whyte enables us to "see" how this one incident portrayed behavior that he had seen many times before in the neighborhood in other contexts.

For example, Whyte described how the two five-man bowling teams were always formed by the process of having two men choosing up sides and that this informal process always resulted in creating two rather equal teams. But in 1938-39 Doc added an innovation: he began keeping scores of each man every Saturday night so that the Norton street gang's team could be selected strictly according to the averages of the bowlers. One afternoon Whyte (who was known to members of the gang as Bill) asked what would happen if the five members of the second team should make better averages than the first team. Would they then become the first team?

"Danny said, 'Suppose they did beat us [the first team], and the San Marcos would come up and want a match with us. We'd tell them, those fellows are really the first team, but the San Marcos would say, "We don't want to bowl them, we want to bowl you." We would say, 'All right, you want to bowl Doc's team?' and we would bowl them.

Doc added, 'I want you to understand, Bill [Whyte], we're conducting this according to democratic principles. It's the others who won't let us be democratic.'" (Whyte, 1955)

James S. Coleman put it very well almost fifteen years ago when he observed, "It is painfully evident to anyone who attempts to study a social system that our quantitative research techniques are in their infancy. For, by sensitive observation and description (as exemplified, say, by William Foote Whyte's Street Corner Society), we can trace the functioning of a social system. Yet, when we attempt to carry out quantitative research in such a system, we find ourselves stymied. We shift from a sensitive examination of events, in which intimate sequence in time suggests causal relations between events, to a crude measurement of 'characteristics' and a comparative cross-sectional analysis that relates one characteristic to another. That is, when we shift from qualitative reporting to quantitative analysis, we change our very mode of inference.

In qualitative description, we report a stream of action in which the interlinking of events suggests how the system functions."

Coleman went on to give an example from his study of high schools, The Adolescent Society (1964). When a youth is asked, "How do you get in the top clique?", the response is, "Well, I'll tell you, like when I came over here, I had played football over at [my former high school]. I was pretty well known by all the kids before I came over. And when I came there was . . . always picking on kids. He hit this little kid one day, and I told him that if I ever saw him do anything to another little kid I'd bust him. So one day down in the locker he slammed this kid against the locker, so I went over and hit him a couple of times, knocked him down. And a lot of the kids liked me for doing that, and I got on the good side of two or three teachers." In contrast, Coleman points out, in order to carry

out quantitative analysis, we must collect a number of such systems (in this case, high school student bodies) and then carry out a comparison to show the interrelation of characteristics. The stream of action is gone, and the whole character of the analysis changes.

It seems to me that the general sense of what Coleman was talking about is illustrated by Erickson (1977, p. 59). "We could," he pointed out, "describe the playing of chess in terms of movement in millimeters forward, backward, and sideways on a plane. The behavior of chess pieces on the board could be coded by observers this way with high inter-coder reliability, and the resulting data could be manipulated statistically. Yet by itself, this would tell us nothing about what was going on in the game of chess. We need descriptive categories with functional relevance for the game--checkmate, defense--terms for the qualities of things that are meaningful for the kinds of things that are meaningful for an understanding of the game as a whole." And I would add that it is important to notice here that Erickson is not talking about beginning with a model, hypothesis, or theorem; rather he suggests starting with understandings of frequently minute episodes or interactions that are examined for their broader patterns and meanings. Thus theory is seen as grounded in empirical experience in the holistic context of the social system under study. This is an important new direction for administrative inquiry to take.

Let me quote a fairly lengthy section of a study of the schooling of hearing impaired children (Upchurch, 1980, pp. 69-74). I think you will agree that it is thick description, portrayed in ordinary

language in a lively manner--all important criteria in judging the adequacy of a naturalistic research report.

"Sounds in a Silent World"

The silent world of the deaf can only be inferred by the hearing observer; he cannot fully know it. It is a world apart from the experience of that observer. It has a different language, different customs, and different values. Its inhabitants rely upon different senses in interpreting their experiences. The citizens of the silent world think differently, linking concepts which have arisen from experience, rather than creating syntactical arrangements of language which describe experience. They seek associations among those who are like themselves and derive enjoyment from their companionship. They find it difficult to cope with the citizens of the hearing world, who speak a language foreign to them, who have values different from their own, who make demands upon them which are often incomprehensible, and who, in turn, often fail to understand them when they strive to make themselves understood.

They and their hearing associates live in two distinctly different cultures. They have agreed upon names for these cultures. One is called the deaf world. The other is called the hearing world. The symbolism of these conventional terms is not accidental.

Sometimes the relatives and the educators of the citizens of the silent world desperately desire for them to move into their world. Seldom is that their desire, and seldom is it possible. They are content, rather, to remain in the company of their deaf friends and to seek fulfillment in the world of silence.

The hearing individual who wishes to enter the silent world may get his passport in order and move among the natives. He may even go so far as to learn the language. It is a strange and foreign one. It also requires the use of a totally different communication system. No longer can he rely on speaking or writing but must learn a new alphabet and new concept-symbols which are expressed in an entirely different medium, manual signs. He may even develop considerable dexterity in the use of this strange language and "speech", but at best it will remain a second language. It is not his native tongue. He must be prepared to remain forever alien. He is not equipped to experience the reality of the deaf person's world. He can only infer that reality, handicapped as he is by his own cultural differences. To step into that world is a cultural shock.

Surprisingly, the silent world is a noisy place. Contrary to one's expectations, upon entering that world he is immediately struck by the volume of sound. But the sounds are not those normally encountered. The citizens of this world have been taught to accompany their use of the native sign language with the use of oral speech, even though they, themselves, cannot hear that speech. The result is striking. It is a speech the visitor is unprepared for.

While the oral speech of the deaf is similar, in some respects, to that of the visitor to his world, one is not prepared for the lack of consonants, the rise and fall of inflection, and variations in stress and volume. All of these are non-existent. The speech is strident and guttural. It consists almost exclusively of vowel sounds. The vowels are difficult to distinguish from each other.

One cannot guess what the missing consonants are and mentally fills in the blanks. The volume is loud and incongruent with the social context. The speaker appears to gesticulate wildly. His facial expressions are exaggerated, almost contorted. His bodily movements, also, are exaggerated as he appears to act out his message. The visitor feels the urge to take a backward step and to create more space between himself and this strange speaker.

Seeking assurance, the visitor may turn to the hearing individuals who populate the fringes of the silent world. He may attempt to find a comfortable relationship with its citizens by learning from the example of those who teach the deaf. He is in for a further shock.

Listening, the visitor finds that the hearing teacher of the deaf also speaks a strange language. It is a combination of oral speech and sign language, like that of the deaf, but it sounds quite different. The syntax is English. The little words, the connectives, are present, but the cadence is strange. The volume, the stress, the phrasing are not native English. In combining oral speech with sign language, it is sign language which sets the pace. That pace is steady, limited only by the manual dexterity of the "speaker". The combination produces a strangely paced delivery in which each word assumes equal stress without regard for its content. The hearing teacher of the deaf tends to keep the volume of the voice at a constant level, adding a strange, mechanical quality to the speech.

Communication between the two worlds is always incomplete. The process cannot compensate for the differences in the two cultures nor in the individual abilities of the speakers. The "sender" and

the "receiver" experience different phenomena. The visitor to this world and its natives share the same dilemma. In order to communicate tongue and adopt a pidgin-English type of language as his mode.

One can only speculate about the experience of the deaf person in his silent world. Unless he is fortunate enough to have learned sign language from deaf parents and to have started the process of language acquisition at birth, like hearing children, he is struggling with some degree of failure because, as Furth (1966) says, '. . . it is taught too late, in an unreasonable medium, in an unnatural way, and by the wrong person.' Who can say how he reacts to the necessity of learning a language which is, in reality, only the translation of a language based upon a medium he does not possess? Who can say how he experiences the necessity to respond to sounds he cannot hear, sounds which for him appear only as fleeting, minutely changing shapes upon the lips of others?

The sounds of the silent world are not the reality of its citizens. They belong only to those who occupy a different world. They exist only in the minds of the citizens of the hearing world, created by physical apparatus which, for the deaf, is inoperable, hopelessly flawed, or damaged beyond repair. For the deaf, the sense which fills the world with beauty and meaning, the sense which enables one to be part of the swirling activity around him, the sense which enables the intimate sharing of one's inmost being with another person--hearing--does not exist.

The dilemma of deaf education is that these two different worlds of experience share the same topographical space. The

educational setting is the scene in which they struggle with the problems of communication and understanding. Unfortunately, it is not the hearing individual who is the visitor to a strange world in this setting. It is the deaf student who is the alien. The burdens of coping and conforming are his.

SUMMARY

The re-emergence of naturalistic approaches to administrative inquiry which began in the 1970's is based on a phenomenological orientation to epistemological issues. Because naturalistic inquiry seeks legitimation as a valid paradigm of inquiry, it must attend to questions as to its worth. This requires dealing with such issues as trustworthiness and this brings us to methodological considerations.

I have argued, first, that we need to be clear as to what we mean by "naturalistic" inquiry. Terminology has been troublesome in dealing with this issue: my answer to it is to accept the term, "naturalistic," as the superordinate term under which fall such methods as participant observation, unstructured open-ended interviewing, and document analysis. Its methods are used in what anthropologists call ethnography, what sociologists often call field research, what some psychologists call field methods, and what journalists call investigative reporting.

Because it is a relative newcomer and still minor paradigm, naturalistic inquiry is appropriately defined by comparison and contrast with the dominant paradigm of inquiry, which is properly called "scientific." The scientific paradigm subsumes the controlled experiment and most designs leading to quantitative analysis.

Second, I have argued that we may judge the adequacy of naturalistic research design and execution in large part by the procedures followed to increase trustworthiness of the investigation in the (1) proposal, (2) execution, or (3) report stages.

Trustworthiness involves plausibility, consistency, interconnectedness, and accurate detail. To assure plausibility requires providing procedures in research design to corroborate information, check accuracy of the investigator's developing perceptions and insights, and validate the thick description of the situation produced by the study against the judgments of knowledgeable independent sources. Prolonged data collection, triangulation, member checks, and obtaining independent feedback from peers are among the procedures recommended for consideration in judging the adequacy of a naturalistic research design. Maintaining a detailed audit trail was also stressed as essential to the trustworthiness of a naturalistic study.

Finally, I argued that the style used in writing the research report is vital to achieving the intended goal: understanding and insight through thick description. Reports of naturalistic inquiry are normally written in ordinary language, as contrasted to the quantitative symbolism appropriate to the scientific paradigm. The report should, first, be trustworthy--that is plausible, well-documented, and based upon sound procedures for independent analysis and corroboration from multiple sources. It should be fair, meaning that it should not be obtained under false pretenses or by unethical means: we are discussing research here, not the exposes of the trash press. And it should be a valid report, which means that it is accurate, based upon well-corroborated evidence, and provide rich, thick description. And last, but not least, the report should be well organized, free of jargon, its parts well inter-connected, but--withal--lively and rich in thick description.

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